

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: July 18, 2001, 15:53:41 ; Search time 22.87 Seconds
(without alignments)
2025.218 Million cell updates/sec

Title: US-09-587-111-5

Perfect score: 4004
Sequence: 1 MTPSSSPVFLRLTLDGGE.....EDEDGASEENYVPVOLLQSN 764

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 412676 seqs, 60623988 residues

Total number of hits satisfying chosen parameters: 412676

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

A_Geneseq_0601:*

- 1: /SIDSR/gcgdata/geneseq/geneseq/AA1980.DAT:*
- 2: /SIDSR/gcgdata/geneseq/geneseq/AA1981.DAT:*
- 3: /SIDSR/gcgdata/geneseq/geneseq/AA1982.DAT:*
- 4: /SIDSR/gcgdata/geneseq/geneseq/AA1983.DAT:*
- 5: /SIDSR/gcgdata/geneseq/geneseq/AA1984.DAT:*
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- 19: /SIDSR/gcgdata/geneseq/geneseq/AA1998.DAT:*
- 20: /SIDSR/gcgdata/geneseq/geneseq/AA1999.DAT:*
- 21: /SIDSR/gcgdata/geneseq/geneseq/AA2000.DAT:*
- 22: /SIDSR/gcgdata/geneseq/geneseq/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	4004	100.0	764	20	AAV29469
2	4004	100.0	764	20	AAV06559
3	4004	100.0	764	21	AAV97358
4	4004	100.0	764	22	AAV35622
5	3988.5	99.6	763	20	AAV42308
6	3988.5	99.6	763	20	AAV29471
7	3939	98.4	764	21	AAV4834
8	3258	81.4	630	21	AAV97364
9	3051.5	76.2	761	20	AAV06556
10	3051.5	76.2	761	20	AAV9790
11	3036.5	75.8	727	20	AAV06560

12	3036.5	75.8	727	20	AAV9798	Human VRRP-1 (VR2)
13	2240	55.9	436	21	AAV97359	Human VR-2 (altern
14	2230	55.7	554	21	AAV97360	Rat partial VR-2 p
15	1689	42.2	843	20	AAV06561	Chicken capsalcin
16	1689	42.2	843	20	AAV97299	Chicken VRI capsal
17	1652	41.3	838	20	AAV06555	Rat capsalcin rece
18	1652	41.3	838	20	AAV9789	Rat VRI capsalcin
19	1651.5	41.2	839	21	AAV97357	Human VR-1 protein
20	1648.5	41.2	839	21	AAV96478	Human vanilloid re
21	1644.5	41.1	839	20	AAV30155	A human vanilloid
22	1644.5	41.1	839	20	AAV06558	Human capsalcin re
23	1644.5	41.1	839	21	AAV32127	Human vanilloid re
24	1640.5	41.0	839	20	AAV30152	A human vanilloid
25	1638.5	40.9	839	20	AAV30153	Human vanilloid va
26	1455	36.3	963	21	AAV96479	Human vanilloid re
27	1440	36.0	279	20	AAV4908	Human secreted pro
28	956.5	23.9	217	20	AAV29470	Human vanilloid re
29	637	15.9	725	22	AAV00412	Human calcium ion
30	635	15.9	732	22	AAV00413	Human calcium ion
31	634	15.8	725	22	AAV31595	Amino acid sequenc
32	607.5	15.2	727	22	AAV31596	Amino acid sequenc
33	482.5	12.1	451	22	AAV00414	Human calcium ion
34	274	6.8	57	20	AAV9793	Human T11251 amino
35	272	6.8	232	19	AAV75021	Human secreted pro
36	247	6.2	71	20	AAV9792	Rat VRI capsalcin
37	224.5	5.6	974	20	AAV55960	Human transient re
38	146	3.6	1095	20	AAV00931	Prostate-tumour de
39	144.5	3.6	1104	22	AAV95437	Human calcium chan
40	140.5	3.5	1791	22	AAV20121	Human sodium chann
41	140	3.5	1214	16	AAV80097	Black widow spider
42	138.5	3.5	352	21	AAV1616	D. Immitis ankyrin
43	138.5	3.5	1745	19	AAV70608	Full length ankyrin
44	138.5	3.5	1745	19	AAV76776	D. Immitis ankyrin
45	138.5	3.5	1745	21	AAV1589	D. Immitis ankyrin

ALIGNMENTS

RESULT 1	AAV29469	standard; Protein: 764 AA.
ID	AAV29469	
XX	AAV29469:	
AC		
XX		
DT	08-OCT-1999	(first entry)
XX		
DE	Human vanilloid receptor homologue VANILREP2.	
XX		
KW	Human: vanilloid receptor homologue; VANILREP2; polymorphic variant;	
KW	PVP-1; therapy: diagnosis: chronic pain; neuropathic; postoperative;	
KW	rheumatoid arthritis; neuralgia; algesia; nerve injury; ischaemia;	
KW	neurodegeneration; stroke; incontinence; inflammatory disorder.	
XX		
OS	Homo sapiens.	
XX		
PN	MO9937765-A1.	
XX		
PD	29-JUL-1999.	
XX		
PF	25-JAN-1999;	99MO-EP00420.
XX		
PR	20-JAN-1999;	99GB-0001209.
PR	27-JAN-1998;	98EP-0300549.
XX	26-OCT-1998;	98GB-0023421.
PA	(SWIK) SMITHKLINE BEECHAM PLC.	
XX		
PI	Davis JB, Duckworth DM, Hayes PD;	
XX		
DR	WPI; 1999-479049/40.	
DR	N-PSDB; AA207114.	
XX		

PT New human vanilloid receptor homologues (VANILREP2)

XX Claim 4: Page 30-32; 47pp: English.

XX The present sequence represents a human vanilloid receptor homologue,
CC designated VANILREP2. VANILREP2 can be used to diagnose disease or
CC susceptibility to disease related to expression or activity of
CC VANILREP2 polypeptides. VANILREP2 may be used to treat diseases
CC including pain, (for example chronic, neuropathic, postoperative,
CC rheumatoid arthritis), neuralgia, algasia, nerve injury, ischaemia,
CC neurodegeneration, stroke, incontinence, and inflammatory disorders.

XX Sequence 764 AA:

Query Match 100.0%; Score 4004; DB 20; Length 764;

Best Local Similarity 100.0%; Pred. No. 0; Mismatches 0; Indels 0; Gaps 0;

Matches 764; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 MTSPPSSPVFRLETTLDGGEDGSEADRGKLDGSGGLPMPESQFQGEDRKFAPIRVNLNY 60

1 mtsppsspvfrletldgggedgseadrgkldfsgsglpmpesqfqedrkfapdirvnly 60

61 RKCTGASQDPNRFDRKLFNNAVSRCVPEDLAGLPYLSKTSKYLDSYTGSGTKTCL 120

61 rkytgasqdpnrfdrklnfnnavsrgvpedlaglpeylsktskyltldseytsgtkctcl 120

121 MKAVLNKDGVNACILPLQIDRDSGNPOPLVNAOCTDDYRGHSAHIAIKRSIQCYK 180

121 mkavlnkdgvnacilpllqidrdsngppplvnaoetddyrgshahiaiekrslqcyk 180

181 LIVENGANVHARACGRFFQKQCTCFYFGBELPLSLACTKQMDVSYLLENPHQASLOA 240

181 livenanganvharacgrffqkgqctcfyfgbelpslactkqmdvsvyllempqpslga 240

241 TDSOGTVAHVMISDNSENATAYTSWDGLQAGARLCPVOLEDIRNLQDLPLKL 300

241 tdsogtvtahvmisdnseentaytswdgllqagarcplvledirnlqdlplkl 300

301 AAEKGEIEIFRHILOREESGSLHSRKFTEMCGPVRVSLYDLASVDSCEENSYLETIAF 360

301 aaegeieifrhiloreesgslhsrkftemcgvprvsllydlasvdsceensyletiaf 360

361 HCKSPHRRHNVLEPINKLQAKMDLLIPKFTINFLCNLYMFTFAVAVHQPPLKQAA 420

361 hcksphrhnmvlepinlklqakmdllipkffnflcnlymftfavaayhqpplkqaa 420

421 PHLKAVGSMILTGHTLLILGIVLYLQGLWYFMRHRPIWISFIDSFEILFLOALL 480

421 phlkavgsmltghltllilgivitlylqglwfyfmrhrpiwistfidsfeilfloodll 480

481 TVVSGVLCFLATEMYLPLVLSALVGLMLNLYTRGFOHTGISVNIQKYLRLDLRFL 540

481 tvvsgvllcfatemylpllvlsalvglmnllytrgfohtgisvniokylrldlrfl 540

541 IYLVLFGRFAVALVLSQGAHREAPTCRNATBSVOPMEQDEGGAOYRGILTEASLEL 600

541 iylvlfgrfavalvlsqgaahreaptcrnatbsvopmegdeggaoayrgilteaslel 600

601 FKRTTIMGELAPQEOHFGMVTLLLAVALTYILLNMLTALMSEPTNSVATDSMSIM 660

601 fkrttimgelapqeoahfgmvtlllavalttyillnmltalmsptnsvatdsmsim 660

661 KLOKAISVLEMENGYWCKRKORAGVYLTGTRKPDGSPDERMCFRVEEYWMASMEOTLPT 720

661 klkkaissvlemengywckrkoragvyltgtrkpdgspdermcfreveeywmasmotlpt 720

721 LCEBDSGAGVPRILENPLVLAPEKEDDGAASEBNYIPVOLLQSN 764

721 lcebdsgagvprtleenplvasppekeddgaseenypvqllqsn 764

RESULT 2

AAV06559
ID AAV06559 standard; Protein; 764 AA.

XX AAV06559;

XX 08-OCT-1999 (first entry)

DE Human vanilloid receptor-related polypeptide 1 (VRRP-1).

XX Vanilloid receptor-related polypeptide 1; VRRP-1; VR2;

KW capsaicin receptor; VR1; human; vanilloid; analgesic; pain;

KW inflammation; therapy; diagnosis.

XX Homo sapiens.

XX W09937675-A1.

XX 29-JUL-1999.

XX 22-JAN-1999; 99WO-US01418.

XX 22-JAN-1998; 98US-0072151.

XX (BEGC) UNIV CALIFORNIA.

XX Brake AJ, Caterina M, Julius DJ;

DR WPI: 1999-469113/39.

XX N-PSDB; AAX87492.

PT New isolated capsaicin receptor polypeptide and related nucleic acid

PT - useful for detecting vanilloid compounds, identifying modulators,

PT and in diagnosis or treatment of e.g. pain and inflammation

PS Claim 4: Page 110-112; 120pp; English.

XX The present sequence represents human vanilloid receptor-related
CC polypeptide 1 (VRRP-1 or VR2), as deduced from a cDNA clone (see
CC AAX87492) isolated from human CCRF-CEM cells. VRRP-1 is an
CC example of a capsaicin receptor-related polypeptide of the
CC invention. It is activated by capsaicin or heat, but may
CC interact with the novel capsaicin receptor VR1 (see AAV06558). The
CC invention provides vanilloid receptor polypeptides and
CC polynucleotides, including capsaicin receptor-related polypeptides
CC and polynucleotides, as well as expression vectors, host cells and
CC transgenic animals. It also provides a method of using such
CC receptors to identify vanilloid compounds in natural products or
CC to screen candidate compounds that modulate capsaicin receptor
CC function for use as analgesics (vanilloid analogues, therapeutic
CC antibodies, antisense oligonucleotides, capsaicin receptor-encoding
CC polynucleotides for gene therapy), flavour-enhancing agents, etc.

CC Capsaicin receptor-related polypeptides and specific antibodies can
CC also be used for the diagnosis and treatment of human disease and
CC pain.

XX Sequence 764 AA:

Query Match 100.0%; Score 4004; DB 20; Length 764;

Best Local Similarity 100.0%; Pred. No. 0; Mismatches 0; Indels 0; Gaps 0;

Matches 764; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 MTSPPSSPVFRLETTLDGGEDGSEADRGKLDGSGGLPMPESQFQGEDRKFAPIRVNLNY 60

1 mtsppsspvfrletldgggedgseadrgkldfsgsglpmpesqfqedrkfapdirvnly 60

61 RKCTGASQDPNRFDRKLFNNAVSRCVPEDLAGLPYLSKTSKYLDSYTGSGTKTCL 120

61 rkytgasqdpnrfdrklnfnnavsrgvpedlaglpeylsktskyltldseytsgtkctcl 120

121 MKAVLNKDGVNACILPLQIDRDSGNPOPLVNAOCTDDYRGHSAHIAIKRSIQCYK 180

121 mkavlnkdgvnacilpllqidrdsngppplvnaoetddyrgshahiaiekrslqcyk 180

Oy	181	LLVENGAVNHARACGRPFQKOGCFEFGELPLSLAACKOMDVSVLLENPHOPASLOA	2400
Dd	181	lllveganvharacgrffqkqgclcfjgelplslaactqvadvsvlllenphopasla	2400
Oy	241	TDSQGNVLHAI.VMI.SDNSAENIAL.VTSMYDGLLOAGARLC.PTVOLEDIRNLDLPRLKL	3000
Dd	241	tcdsgnvtvlhal.vmtsdnsaenial.vtscopydlldqegarlcptvqedirnlqdlrplkl	3000
Oy	301	AAXEKTEIFRHHIIORESGSLHSRKFTFEMWCYCPVNVSLYDLIASVNSCENSYLEIAF	3600
Dd	301	aakektelfrhhilgreisghsrftfecwcyppnvsvlydlasvsceensyleiaf	3600
Oy	361	HCKSPHRHRVVLEP.LNKLOAKMDLIIPKEFLNFLCNLYMFETFAVAAYHOPTLKROAA	4200
Dd	361	hcksphrhrmvleplnkloakmdliipkefnflcnlymfiftavayhqptlkrgaa	4200
Oy	421	PHLKAEGNSMLTGHIILILGGIYLVLVGOLWYWRHRHVFIWISFDISYEILLFOALL	4800
Dd	421	phlkaeygnsmllcgihilllggiylvgqlwywrhvfiwisfidsyfeillfqlall	4800
Oy	481	TVVSQVLCFL.IEWNYLPLTVSALVGMNLNLT.YRGFOHNGIVSVMI.OXVILRDL.NREL	5400
Dd	481	tvvsqvcflieawyrlplsalygmnlntyrfgfhngivsvmioxvilrdlnrel	5400
Oy	541	IYLVFLGF.AVALVLSLOSAMRPAPTPGNATESVQMEGOEDGCNGAOVRGLIEASLET	6000
Dd	541	iyvlflgfavalvlslosgeawrpapcpgnatesvqmegedengayrglieastelet	6000
Oy	601	EKFRTIGMELAF.OQLHFRGVLLLLLAYVILTITLLNM.IALMSETVNSVATDSMSIW	6600
Dd	601	kfftigmelafoqlhfrgvlllllayviltitllnmialmsetvnsvatdsmsiw	6600
Oy	661	KLOKAI.SYLEMENGYWMCRKKORAGVM.LVTGPKDSPDERMCPRVEEVMAWSWEOTLPT	7200
Dd	661	klokaisylemengywmcrkkqragsvm.lvtgtpdspdermcprveevmasweotlpt	7200
Oy	721	LCEBPSGAGVPRTL.ENPVLASPKPEDEGDASEENTVPVOLIQSN 764	
Dd	721	lcebpgagvprtl.enpvlaspkpedegdaseentyvpvoliqsn 764	
<hr/>			
RESULT 3			
ID	AA97358	standard; Protein: 764 AA.	
XX	AA97358;		
DT	05-SEP-2000	(first entry)	
XX	Human VR-2 protein.		
XX	De		
KW	VR-2; human; vanilloid receptor; nociceptor; pain signalling; hyperalgesia; musculoskeletal disorder; neuropathic pain;		
XX	Chromosome 17p11-12; gene therapy.		
OS	Homo sapiens.		
FH	Key	Location/Qualifiers	
FT	Modified-site	/note- "CGMP-dependent protein kinase phosphorylation site"	
FT	Domain	/label= ankkyrin_repeat_domain 162..194	
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FT	Modified-site	/note- "N-glycosylation site" 192..195	
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FT	Modified-site	765..770	/note= "myristoylation site"
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PN	WO200029577-A1.		
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PD	25-MAY-2000.		
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PF	12-NOV-1999;	99WO-US26701.	
PR	13-NOV-1998;	98US-0108322.	
PR	28-DEC-1998;	98US-0114078.	
PR	26-FEB-1999;	99US-0258633.	
PR	19-OCT-1999;	99US-0421134.	
XX			
PA	(MILL-) MILLENNIUM PHARM INC.		
XX			
PI	Curtis RAJ;		
XX			
DR	WPI: 2000-387790/33.		
DR	N-PSDB: AAA30234.		
XX			
PT	New capsaicin/vanilloid receptor polynucleotides and polypeptides, used		
PT	to modulate pain signalling mechanisms		
PS	Claim 11; Fig 2; 183pp; English.		
XX			
CC	The present sequence is the protein sequence for human		
CC	capsaicin/vanilloid receptor VR-2, which is involved in pain signalling.		
CC	The coding sequence was isolated by searching a heart cDNA library for		
CC	genes encoding novel receptors of the capsaicin/vanilloid family, and has		
CC	been shown to be located at chromosome 17p11-12. This region has been		
CC	associated with myasthenia gravis, Smith-Wagenis syndrome, CORD5,		
CC	Cone-rod dystrophy, choroidal dystrophy, central areolar and retinal cone		
CC	dystrophy, and it is possible that the protein may be used to treat or		
CC	diagnose these disorders. In addition, the gene, protein and its		
CC	antibodies can be used to diagnose and treat hyperalgesia, inflammation,		
CC	infection, ischemia, joint pain, tooth pain, headaches, pain associated		
CC	with surgery or neuropathic pain, possibly via the use of gene therapy.		
XX			
Sequence	764 AA:		

Query Match	100.0%;	Score 4004;	DB 21;	Length 764;
Best Local Similarity	100.0%;	Pred. No. 0;		
Matches 764;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;

[illegible]

XX	
PR	08-DEC-1998; 98GB-0027016.
PA	(MERI) MERCK SHARP & DOHME LTD.
XX	
PI	Bonnert TP;
XX	
DR	WPI: 2001-064250/08.
DR	N-PSDB; AAC60297.
XX	
PT	New polynucleotide encoding human vanilloid receptor-like receptor for
PT	diagnosing and treating pain, infections, allergies, and cancers -
XX	
PS	Claim 1; Fig 1; 36pp; English.
XX	
CC	The present invention relates to the human vanilloid receptor-like
CC	receptor. This receptor may be used for diagnosing or treating
CC	conditions associated with altered vanilloid receptor-like (VR-L)
CC	receptor expression. It may also be used to treat abnormal conditions
CC	associated with pain. Conditions or diseases that can be diagnosed or
CC	treated include viral, bacterial and fungal infections, allergic
CC	responses, mechanical injury associated with trauma, hereditary
CC	diseases, lymphoma or carcinoma, or other conditions which activate
CC	the genes of the lymphoid tissues.
SQ	
Sequence	764 AA;
XX	

Query Match	100.0%	Score 4004:	DB 22:	Length 764:
Best Local Similarity	100.0%	Prid. NO. 0:		
Matches 764:	Conservative 0:	Mismatches 0:	Indels 0:	Gaps 0:
QY 1	MTSPSSPVFLRETTLDGQEDGSEADRGKLLFGSGSLPMEOSFOGEDKKFAPQIRVNLNY	60		
Db 1	mtspsspvflretldggedgseedrklldfsglpmeeqfgedtckfapqirvnlly	60		
QY 61	RKGTSASQPPDRPRFRDRLFNAAVSRGVEDLADLPETLSKTSKTYLTDBEYRSGTKCL	120		
Db 61	rkgtasapdpdrfrdrllfnavsrgvpedlaglpetylsktskyltdseytsgtkcl	120		
QY 121	MKAVNLKDGVNACLLPLQLDHRDSGNPQVPLNMQCTDDYRGSHALIAIEKRSLOCVK	180		
Db 121	mkavnlkdgvnacllpllldrdsngnpqlvnaqctddyrgshalialekrslgcvk	180		
QY 181	LIVENGANVHARACGRPFQKGGCTCFYRGELPLSLAACKQMDVSVYLENPHOPASIQ	240		
Db 181	livenganvharacgrffqkggctcfyrgelplslaaackqmdvsvylenphopasiqa	240		
QY 241	TDSQNTVTLHALVMSIDNSAENILVTSMYGGLQAGRLCPYQLEIRNLQDTPKL	300		
Db 241	tdsqnvtvltalvmsidsaenilaivtsmygglqagarlcpvtqleirnlqdtplkl	300		
QY 301	AAKEKKEIEIFRHIILOREHSGLSLRKTEEMCGCPVRSLYDLASVDSCEENSVLEIIAF	360		
Db 301	aakegkieifrhilgrefsglshsrktewcgyprvslldasvdsceensvleliaf	360		
QY 361	HCKSHRRRRVWVLEPLNKLLQAKMDLLPRKFLNPLCLYIMFTFANAAYQPLTKQAA	420		
Db 361	hckshrrrrvmvleplnklqakwllprkfllncllyimfiftavayqppltkyaa	420		
QY 421	PHLKREVENSMULTSHLILGLGYILVGOAWMYEPRRRIVFTWISPDYFETLEFOAL	480		
Db 421	phlkrevgvsmultghllllyggyllyvgqlywtfarrthvfwisfidyfeilffgall	480		
QY 481	TVVSOVLCLFAIEWYLLPLVASALVGLMNLILYTRGFOHTSIYSVMIOKVILRDLRPL	540		
Db 481	tvvsgvlclfaiewylpllvsaalvlgwnllytrcgftqbtgyvmvlgkvllrdlrfll	540		
QY 541	TYLVPLREFANALVLSQSEAMRPAPRPTGNATSEYQPRHEGDEGNGAQVYRGILIASIEL	600		
Db 541	tylvplrfefanavlslsqseawrpaprtgpnatesvqpmeggedengaqvrygileasiel	600		
QY 601	EKFTIGMELAFQEOELHGRGVULLLLALAYLLTYILLNLMLIALMSEFVNSVADSMSIW	660		


```

XX Human; vanilloid receptor homologue; VANILREP2; polymorphic variant;
KM PVP-1; therapy: diagnosis; chronic pain; neuropathic; postoperative;
KM rheumatoid arthritis; neuralgia; algesia; nerve injury; ischemia;
KM neurodegeneration; stroke; incontinence; inflammatory disorder.
XX
OS Homo sapiens.
XX MO937765-A1.
XX
XX 29-JUL-1999.
XX
XX 25-JAN-1999; 99WO-EP00420.
XX
XX 20-JAN-1999; 99GB-0001209.
XX 27-JAN-1998; 98EP-0300549.
XX 26-OCT-1998; 98GB-0023421.
XX
XX (SMIK ) SMITHKLINE BEECHAM PLC.
XX
XX Davis JB, Duckworth DM, Hayes PD;
XX
XX WPI: 1999-479049/40.
XX N-PSDB: AA207116.
XX
XX New human vanilloid receptor homologues (VANILREP2)
XX
XX Claim 4; Page 35-37; 47pp; English.
XX
XX The present sequence represents a human vanilloid receptor homologue
CC VANILREP2 polymorphic variant PVP-1. VANILREP2 can be used to diagnose
CC disease or susceptibility to disease related to expression or activity
CC of VANILREP2 polypeptides. VANILREP2 may be used to treat diseases
CC including pain, (for example chronic, neuropathic, postoperative,
CC rheumatoid arthritis), neuralgia, algesia, nerve injury, ischaemia,
CC neurodegeneration, stroke, incontinence, and inflammatory disorders.
XX
XX Sequence 763 AA:
SQ

```

Query Match 99.6%; Score 3988.5; DB 20; Length 763;
 Best Local Similarity 99.9%; Pred. No. 0; Mismatches 0; Indels 1; Gaps 1;
 Matches 763; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

```

OY 1 MTPSSSPVRLLETLDDGDESEADRGKLDGSGSLPPMESQFOGGRKFAPIRYNLNY 60
DB 1 mtpssspvrlletlddgdegsaadrkldfgsglppmesqfgedrxfapqirnlly 60
OY 61 RKGTASQDPDRFDRDLFNAVSRGVPEDLAQLPEYLSKTSKYLTDSEYTBGSGTKCL 120
DB 61 rkgtasqdpdrfdrdlfnavsrgvpedlaglpeylsktskyltdseytbgstgkctl 120
OY 121 MKAVALNKGVNACILPLQIDRDSGNPQLVNAOCTDYYRGHSAHLAIEKRSLQCYK 180
DB 121 mkaavlnkgvnaacilplqidrdsnpqplvnaqctdyyrghsahlialekrsiqcyk 180
OY 181 LLVNGANVHARACGRFQKGGTCFYEGELPLSLAACKQMDVSYLLENPPOASLOA 240
DB 181 llvnganvharaegrffqkggtcfyfgelplslaackqmdvsvyllenpqpasloa 240
OY 241 TDSQNTVYHALVMTSDNSAENIALVTSMTDGLQAGARLCPVQLEDIRNLQDLTPKL 300
DB 241 tdsqntvyhalvmtsdnsaenialvtsmtdglqagarlcpvtqledirnlqdltpkl 300
OY 301 AAKEKIEIFRIILQREPSGLSLSRKFTKEMCYGPVRVLYDLASVDSCEMSVLEITAF 360
DB 301 aakekieifriilqrepsglslsrkftkemcygpvrvlydlasvdsceemsvleita 360
OY 361 HCKSPHRRHVVLEPLNKLQAKMDLLPFKFLNLCNLIVMFIPTAAVYHQPTLKKQA 420
DB 361 hcksphrhvvleplnklqakmdllpfkflnlnclivmfiptaaavyhqpctlkk-aa 419
OY 421 PHLKAEGNSMLLTGHILLGLGTYLLVGQLMYFWRHVFVWISFTDSYFEILLFQALL 480

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DB 420 phlkaevngsmlltghilllllgtyllvgqlmyfwrhvfivsfidsyfeillfqa11 479
OY 481 TVVSQVLCFLAIEWYPLILYSALVIGMLLYTRGFQHTGISWICKVILRDLRFL 540
DB 480 tvvsqvlcflaiewyplilysalvlgwmllytrcghgtgyswmlkvilrdlrfl 539
OY 541 IYLVFLGFAVALVLSQEAHREAPTPGNATESVOPMGODEGNGAQRGLLEASLEL 600
DB 540 iylvflgfaavalvlsqeawrpeaptgnatesvqpmeggedngaqrgllleaslel 599
OY 601 FKFTTGMGELARQEOULHFRGMVLLLLAYVLLTYILLMLIALMSEIYNSVATDSMSIW 660
DB 600 fkfttgmgelarqequlhfrgmvllyllayvlllylllmlialmsetvnsvaldsmsiw 659
OY 661 KIQKATSVLEMENGYWVCKKQAGVMTLVGTRKPDGSPDERKCFREEVNMAWSMBOPLPT 720
DB 660 kiqukatsvlemengywwckkqagvmtlvgtkpdgspdercfrveevnwaswboqlpt 719
OY 721 LCEDEPSGAGVPRTELENPVLASPPKEDGASEENVYPVQLQSN 764
DB 720 lcedpsgagvprtleenpvlasppkedegaseenvypvqlqsn 763

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RESULT 7
 AAY84834
 ID AAY84834 standard; Protein; 764 AA.
 AC AAY84834;
 XX
 XX 08-AUG-2000 (first entry)
 DT
 DE Amino acid sequence of a vanilloid receptor-like (VR-L) protein.
 XX
 KM Cation channel protein; vanilloid receptor-like 1 protein; VR-L;
 KM noxious heat; pain; inflammation; tissue damage; nociception;
 KM gene therapy; sensory neuron; immune system; analgesic; immunomodulatory;
 KM neuromodulatory.
 XX
 OS Homo sapiens.
 XX
 PH Key Location/Qualifiers
 FT Misc-difference 149 /note= "Gly encoded by CAG"
 FT Region 162..193 /note= "ankyrin-like repeat"
 FT Misc-difference 200 /note= "Lys encoded by AAT"
 FT Region 208..240 /note= "ankyrin-like repeat"
 FT Region 293..323 /note= "ankyrin-like repeat"
 FT Domain 391..410 /note= "ankyrin-like repeat"
 FT Domain 438..453 /note= "transmembrane domain 1"
 FT Domain 468..489 /note= "transmembrane domain 2"
 FT Domain 501..527 /note= "transmembrane domain 3"
 FT Domain 535..554 /note= "transmembrane domain 4"
 FT Domain 560 /note= "transmembrane domain 5"
 FT Misc-difference 587..608 /note= "Thr encoded by GCT"
 FT Region 619..645 /note= "possible pore loop"
 FT Domain /note= "transmembrane domain 6"
 FT Misc-difference 667 /note= "unspecified amino acid encoded by TMT"
 FT
 PN WO200022121-A2.

PD 20-APR-2000.
 XX 08-OCT-1999; 99WO-GB03348.
 XX 09-OCT-1998; 98GB-0022124.
 XX (UNLO) UNIV COLLEGE LONDON.
 XX Garcia R, Wood JN, England S;
 DR WPI: 2000-317978/27.
 DR N-PSDB: AAA14874.
 XX Novel non-selective cation channel protein and nucleotides useful as
 PT screening agents and in gene therapy of disorders associated with
 PT sensory neurons and leucocytes such as pain, autoimmune disorders and
 PT leukemia
 XX Claim 2; Fig 3A; 55pp; English.
 XX
 CC The present sequence represents a non-selective cation channel protein,
 CC designated vanilloid receptor-like 1 (VR-L). The protein is obtained
 CC from human T lymphocytes. The VR-L protein is activated by noxious heat,
 CC and is not capsaicin sensitive. VR-L is expressed in sensory neurons,
 CC and is likely to play a role in mediating the pain and inflammation
 CC accompanying tissue damage (nociception). The VR-L polynucleotide is
 CC useful for influencing the electrophysiological and/or pharmacological
 CC properties of a cell, and is also useful in the gene therapy treatment
 CC of disorders associated with sensory neurons and/or cells of the immune
 CC system and also for the preparation of a medicament for use in gene
 CC therapy. The VR-L polynucleotides and polypeptides are useful for
 CC identifying a substance with ion-channel modulating activity (such as
 CC analgesics), or compounds which affect nociception, immunomodulatory
 CC agents, neuromodulatory agents.
 XX
 XX Sequence 764 AA;
 Query Match 98.4%; Score 3939; DB 21; Length 764;
 Best Local Similarity 98.0%; Pred. No. 0;
 Matches 749; Conservative 6; Mismatches 9; Indels 0; Gaps 0;

QY 481 TVSQVLCFLAIEWYLPPLVSALVGLWNLVYTRGFQHTGYSVMIOKVIKRLDRLRL 540
 |||||
 DB 481 tvsqvlfclvlewylpplvsaalvgwlnllyttrgfqhtgysvmidkvlrldmrvrlv 540
 QY 541 TVLVFEGFAVALVSLSGEMRPAFTGPNTATESVQPMGQDEGSAQYRGILEASLEL 600
 |||||
 DB 541 tylvlfegfavalvslsgemrpaftgpnatesvqpmegdegnsgayrgileaslel 600
 QY 601 EFKTIGMGEIAPFOELHFRGWLILLLAVYLLTYLLLNMLIALMSFVNSVATDSNSIW 660
 |||||
 DB 601 kftlmgelafqejlhrgmwlililayvlltylllnmlialmsetcvnsatdsnsiw 660
 QY 661 KLOKAIISVLEMGNGYWCRCRKORAGVMLTVGTKPDGSPDERMCFRFEVNNASMEOTLPT 720
 |||||
 DB 661 klqkaiisvlemgngywcrcrkqragvmltygtkpdgspdermcfvfevnnasmeotlpt 720
 QY 721 LCEDESGAGVPRTELENPVLASPPKEDGASBENTVPVQLQSN 764
 |||||
 DB 721 lcedpsgagvprtleenpvlasppkedgaseenypvqllqsn 764
 RESULT 8
 AA97364
 ID AA97364 standard; Protein: 630 AA.
 XX
 AC AA97364;
 XX
 DT 14-SEP-2000 (first entry)
 XX
 DE Human VR-2 (alternate form) protein.
 XX
 KW VR-2; human; vanilloid receptor; nociceptor; pain signalling;
 KW hyperalgesia; musculoskeletal disorder; neuropathic pain;
 KW chromosome 17p11-12; gene therapy.
 XX
 OS Homo sapiens.
 XX
 PN WO200029577-A1.
 XX
 PD 25-MAY-2000.
 XX
 PF 12-NOV-1999; 99WO-US26701.
 XX
 PR 13-NOV-1998; 98US-0108322.
 PR 28-DEC-1998; 98US-0114078.
 PR 26-FEB-1999; 99US-0258633.
 PR 19-OCT-1999; 99US-0421134.
 XX
 PA (MILL-) MILLENNIUM PHARM INC.
 XX
 PI Curtis RAJ;
 XX
 DR WPI: 2000-387790/33.
 DR N-PSDB: AAA30255.
 XX
 PT New capsaicin/vanilloid receptor polynucleotides and polypeptides, used
 PT to modulate pain signalling mechanisms
 XX
 PS Example 1; Fig 16; 183pp; English.
 XX
 CC The present sequence is the protein sequence for an alternate form of
 CC human capsaicin/vanilloid receptor VR-2, which is involved in pain
 CC signalling. The coding sequence was isolated by searching a heart
 CC cDNA library for genes encoding novel receptors of the
 CC capsaicin/vanilloid family, and has been shown to be located at
 CC chromosome 17p11-12. This region has been associated with myasthenia
 CC gravis, Smith-Magenis syndrome, COR5, Cone-rod dystrophy, choroidal
 CC dystrophy, central areolar and retinal cone dystrophy, and it is possible
 CC that the protein may be used to treat or diagnose these disorders. In
 CC addition, the gene, protein and its antibodies can be used to diagnose
 CC and treat hyperalgesia, inflammation, infection, ischemia, joint pain,
 CC tooth pain, headaches, pain associated with surgery or neuropathic pain,

CC possibly via the use of gene therapy.
 XX
 SQ Sequence 630 AA:

Query Match 81.4%; Score 3258; DB 21; Length 630;
 Best Local Similarity 82.5%; Pred. No. 2e-301;
 Matches 630; Conservative 0; Mismatches 0; Indels 134; Gaps 1;

```

QY 1 MNSPSSPVFRLETLTGSGEDSGEADRGKIDPFGSGLPMESSQPGGDRKFAPOIRNLMY 60
DB 1 mnspsppvfrlecltdgsgedsgeadrgkldtgsqllpmesqgdrkfapqirynlmy 60
QY 61 RKGTGASOPDPNFRDRRLFNAVSRGVPEDLAGLPEYLSKTSKYLTDSEYESTGKTCL 120
DB 61 rkgtgsgopdpnfrdrirfinavsrgvpedlaglpeylsktskyltdseyestgktcl 120
QY 121 MKAVLNLKDGVNACILPLQLIDRDSGNPQPLVNAQCTDDYYRGSHALHAIERKSLQCYK 180
DB 121 mkavlnlkdgvnaciilplqlidrdsgnpqlvnaqctddyrgshalhalekrsiqcyk 180
QY 181 LLYENGANVHARACGRFPQKGGCTCFYFGELPLSLACTKQMVVSYLLENPHQPSLOA 240
DB 181 llyenganvharcgrfifqkggctcfyfgelplslactkqmvvsvyllenphqpslga 240
QY 241 TDSOGNTVLHALVMISDNSAENIALVTSMYDGLQAGARLCPTVOLEDIRNLQDLPLKL 300
DB 241 tdsogntvhalvmisdnsaenialvtsmydglqagarlcpvledirnlqdlplkl 300
QY 301 AAKEGKIEIFRHLIQREFSGLSLRSKRTFEMCYGPVRSVLYDLASVDSCENSVLEIIAF 360
DB 301 aakegkieifrhliqrefsglsllrskrtfemcygpvrsvlydlasvdsceensvleliaf 360
QY 361 HCKSPRRHVMVLEPRLNKLQAKWDLIRKFLNFCNLIMYIFPAVAYHOPTLKKQAA 420
DB 361 hcksprrhvmvleprlnklqakwdlirpknfcnlmlyifpavayhoptlkkqaa 420
QY 421 PHLKAENVGSMILTGHIILLGIGYLLVGLWYFMRHRYFIWISFIDSYFEILFQALL 480
DB 421 phlkaenvgsmiltgihilllgigyllvglwylfmrhryfiwisdysfeilffiqall 480
QY 481 TVYSOVLCLALIEWYPLVLSALVGLMWLLYTRGFQHTGIYSVMIOKVIILDLIRPLL 540
DB 481 tvysovlclaliewyplvlsalvglmwllytrgfhgtgiysvmiokvilldlirpll 540
QY 541 IYLVFLFGFAVALVSLSGEAMREAPRTGNATPESVQPMGQDEDEGAGQYRGITLASEL 600
DB 541 iylvflfgfavalvslsgeamreaprtgnatpesvqpmgqdedegagayrgitlaselel 600
QY 601 FKFTIGMGLAFQEOQLHFRGMVLLLLAVVLTYYILLNMLIALMSETVNSVATDSMSIA 660
DB 601 fkftigmglafqeoqlhfrgmvllllavvlttyillnmlialmse tvnsvatdsmsia 660
QY 661 KIQAALSVLEMGYWMCKKQKQAGVMLVGTCPDGSPPERKCFRVEEYVNMASWEDTLP 720
DB 661 kiqaalsvlemgymckkqkqagvmlvgtcpdgspperkcfrveeyvnmaswedtlp 720
QY 721 LCEDPGAGVPRTIENPVLASPKEDGASBENYVYVOLLSON 764
DB 721 lcepdgagvprtienvplaspkedgasbenyvyvollyson 764
QY 587 lcepdsgagvprtienvplaspkedgasbenyvyvollyson 630
  
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RESULT 9
 ID AAY06556
 AAY06556 standard; Protein; 761 AA.

XX AAY06556;
 DT 08-OCT-1999 (first entry)
 XX Rat vanilloid receptor-related polypeptide 1 (VRP-1).
 DE Vanilloid receptor-related polypeptide 1; VRP-1; VR2;
 XX
 KW

KW capsaicin receptor; VR1; rat; vanilloid; analgesic; pain;
 KW inflammation; therapy; diagnosis.

XX Rattus rattus.

PN W09937675-A1.

PD 29-JUL-1999.

PF 22-JAN-1999; 99WO-US01418.

PR 22-JAN-1998; 98US-0072151.

PA (REGC) UNIV CALIFORNIA.

PI Brake AJ, Caterina M, Julius DJ;

DR WPI; 1999-469113/39.

DR N-PSDB; AAX87478.

PT New isolated capsaicin receptor polypeptide and related nucleic acid
 PT - useful for detecting vanilloid compounds, identifying modulators,
 and in diagnosis or treatment of e.g. pain and inflammation

PS Claim 4: Page 81-83; 120pp; English.

The present sequence represents rat vanilloid receptor-related polypeptide 1 (VRP-1 or VR2), as deduced from a cDNA clone (see AAX87478) isolated from a rat brain cDNA library. VRP-1 is an example of a capsaicin receptor-related polypeptide of the invention. It is not activated by capsaicin or heat, but may interact with the novel capsaicin receptor VR1 (see AAY06555). It shows 49% identity with rat VR1. The invention provides vanilloid receptor polypeptides and polynucleotides, including capsaicin receptor-related polypeptides and polynucleotides, as well as expression vectors, host cells and transgenic animals. It also provides a method of using such receptors to identify vanilloid compounds in natural products or to screen candidate compounds that modulate capsaicin receptor function for use as analgesics (vanilloid analogues, therapeutic antibodies, antisense oligonucleotides, capsaicin receptor-encoding polynucleotides for gene therapy), flavour-enhancing agents, etc. Capsaicin receptor-related polypeptides and specific antibodies can also be used for the diagnosis and treatment of human disease and pain.

SQ Sequence 761 AA:

Query Match 76.2%; Score 3051.5; DB 20; Length 761;
 Best Local Similarity 77.7%; Pred. No. 1.3e-281;
 Matches 598; Conservative 62; Mismatches 93; Indels 17; Gaps 7;

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QY 1 MNSPSSPVFRLETLTGSGEDSGEADRGKIDPFGSGLPMESSQPGGDRKFAPOIRNLMY 60
DB 1 mnspsppvfrlecltdgsgedsgeadrgkldtgsqllpmesqgdrkfapqirynlmy 60
QY 61 RKGTGASOPDPNFRDRRLFNAVSRGVPEDLAGLPEYLSKTSKYLTDSEYESTGKTCL 115
DB 61 rkgtgsgopdpnfrdrirfinavsrgvpedlaglpeylsktskyltdseyestgktcl 115
QY 116 GRTCLMAVNLKDGVNACILPLQLIDRDSGNPQPLVNAQCTDDYYRGSHALHAIERKSL 175
DB 116 grtclmkavlnlkdgvnaciilplqlidrdsgnpqlvnaqctddyrgshalhalekrs 175
QY 176 LDCVLLVNGANVHARACGRFPQKGGCTCFYFGELPLSLACTKQMVVSYLLENPHQP 235
DB 176 ldcvllvnganvharcgrfifqkggctcfyfgelplslactkqmvvsvyllenphqp 235
QY 236 ASLOATDSOGNTVLHALVMISDNSAENIALVTSMYDGLQAGARLCPTVOLEDIRNLQDL 295
DB 236 asloatdsogntvhalvmisdnsaenialvtsmydglqagarlcpvle dirnldl 295
QY 296 TPCLKAAKGGKIEIFRHLIQREFSG-LSHLRSKRTFEMCYGPVRSVLYDLASVDSCENSV 354
  
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|||||
Db 297 tpllaaegkietlfrhlqreifsgpygplsrkltewcygvrvslydlsavdsekns 356
355 LEIATFHCKSPHRRHVMVLEPLNKLQAKMDLIPKFFLNLCNLIYMFITAAVAYHPT 414
357 leiafncspnrrnmvyleplnklqekwdrlysrfffnacylymfitvayhqs 416
QY 415 LKQAPHLKAEGNSMLTGHILLGGIYLLVGQLMYFMRHVFWSIFDSYFELF 474
Db 417 lqgpaipskatfgesmllghlllllggyllyllgqlwyfwrllflwistmsdyfelf 476
QY 475 LFOALLTVVSGVLCFLAEWLEPLVLSLVGMNLVYTGFOHTGYSVMIOKVLIRD 534
Db 477 llqellvlsqvlrfmetewy1p1lvls1vgwln1lytrg1qhtg1ysvm1qkvl1rd 536
QY 535 LLRFLIYLVLPFGFAVALVLSLSOAMRPEAPTPNATESQPMEGODENGAOYRGIL 594
Db 537 llrllylvlfvlfavayls1stears1pkapednastvteqplvgqee--papyrsl 594
QY 595 EASLELFRFTIGMELAFQEOHFRGWL1LLAYVLLTYLLNMLTALMSETVNSVAT 654
Db 595 daslelfrftigmela1fgeqlrfrygvlllllayvlltylllnmlalmselvnhad 654
QY 655 DSNSTWKLQKRAISYLEMENGWMC-RKQKAGVMLYGTGKPDGSPDERMCRVEEVMAS 713
Db 655 nswslwklqkraisylemenywwcrkkhregrlkvgtrgdgtpderwctfveevmaa 714
QY 714 WEORLPTLCEDPSGAGVPRILENVLASPKEDGASEEYVVOLOS 763
Db 715 weklptlpsedpsgpltnknpt----skpgksaseedhlp1qylqs 760

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RESULT 10
AAM99790
ID AAM99790 standard; Protein: 761 AA.
XX
AC AAM99790;
XX
DT 16-JUN-1999 (first entry)
XX
DE Rat VRRP-1 (VR2) capsaicin receptor.
XX
KW VR1; capsaicin receptor; VR2; VRRP-1; analgesic; diagnosis;
KM human disease; painful syndrome.
XX
OS Rattus rattus.
XX
PN M09909140-A1.
XX
PD 25-FEB-1999.
XX
PE 20-AUG-1998; 98WC-US17466.
XX
PR 22-JAN-1998; 98US-0072151.
PR 20-AUG-1997; 97US-0915461.
XX
PA (REGC ) UNIV CALIFORNIA.
XX
PI Brake A, Caterina M, Julius DJ;
XX
DR WPI; 1999-181023/15.
DR N-PSDB; AAX19730.
XX
PT New capsaicin receptor polypeptide - useful for screening or
PT characterizing capsaicin receptor-binding compounds
XX
PS Claim 4; Page 78-79; 99pp; English.
XX
CC The present sequence is an isolated capsaicin receptor polypeptide
CC (1). Capsaicin polypeptides are useful for identifying binding compounds
CC which affect cellular responses. Preferably this is for identifying a
CC compound that binds (1) and affects a cellular response associated with
CC capsaicin biological activity (e.g. intracellular calcium flux). The

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CC polypeptides and host cells are useful for detecting a vanilloid
CC compound (an essential structural component of capsaicin) from natural
CC products by detecting an alteration of intracellular response associated
CC with capsaicin receptor activity, preferably an alteration of
CC intracellular calcium levels, and are useful for screening for compounds
CC for use in analgesics. Capsaicin receptor polypeptides and antibodies
CC are useful for diagnosis and treatment of human diseases and painful
CC syndromes. The transgenic mammals can be used to screen for capsaicin
CC receptor antagonists and agonists. Prior art methods for screening or
CC characterizing new capsaicin receptor-binding compounds relied on assays
CC using sensory neurons in culture or in intact animals. The new
CC polypeptides provide a more sensitive screen.
XX
SQ Sequence 761 AA;

```

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Query Match 76.2%; Score 3051.5; DB 20; Length 761;
Best Local Similarity 77.7%; Pred. No. 1.3e-201;
Matches 598; Conservative 62; Mismatches 93; Indels 17; Gaps 7;

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QY 1 MTSFSSPVFRLETLDDGQEDSGEADRGKLDGSGLPMEOSQFQGEDRKFPQIRVNLNY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1 mtsasspafletsdgedgeaevnkqge-----ppmespfirednspqkvlhnl 56
QY 61 ----RKGTGA-SQDPNFRDRLEFNAYSRCVPEDLAGLPEYLSKTSKYLTDSYEGST 115
| | | | | : : : : : : : : : : : : : : : : : : : : : : : : :
Db 57 lkrphtsapsqgepdrfdtrlfsvsrsgpeelcgllaylrmakkylldsayegst 116
QY 116 GKTCIMKAVNLKQGVNACILPLQIDRDSGNRPVNAOCTDQYVGHSLHAIRKRS 175
||||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 117 gktclmkavnlqgvnacimpllqldksnprplynaqctde1yghsalhlaekrs 176
QY 176 LOCYKLVENGANYHARAGRFQKGOCTCFYFCELPLSLACTKQMDVSYLLENHOP 235
||||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 177 lqcvklivengadvh1racgrffiqkbgctcyfelp1slaackkqdvrvy1lenhqp 236
QY 236 ASLQATDSQGNVTLHALVMSDNSAENIALVTSWYDGLLAGARLCPTVQLEDIRNLQDL 295
||||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 237 asleatds1gnvt1halvmladnsensalv1hmydgl1qmgar1c1ptvqle1shnqgl 296
QY 296 TPLLAKKEGKIEIFRHILOREFSG-LSHLSKRTKEMCYGVRRSLVDLASVDSCEENSV 354
||||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 297 tpllaaegkietlfrhlqreifsgpygplsrkltewcygvrvslydlsavdsekns 356
355 LEIATFHCKSPHRRHVMVLEPLNKLQAKMDLIPKFFLNLCNLIYMFITAAVAYHPT 414
357 leiafncspnrrnmvyleplnklqekwdrlysrfffnacylymfitvayhqs 416
QY 415 LKQAPHLKAEGNSMLTGHILLGGIYLLVGQLMYFMRHVFWSIFDSYFELF 474
| : | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 417 lqgpaipskatfgesmllghlllllggyllyllgqlwyfwrllflwistmsdyfelf 476
QY 475 LFOALLTVVSGVLCFLAEWLEPLVLSLVGMNLVYTGFOHTGYSVMIOKVLIRD 534
| : | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 477 llqellvlsqvlrfmetewy1p1lvls1vgwln1lytrg1qhtg1ysvm1qkvl1rd 536
QY 535 LLRFLIYLVLPFGFAVALVLSLSOAMRPEAPTPNATESQPMEGODENGAOYRGIL 594
||||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 537 llrllylvlfvlfavayls1stears1pkapednastvteqplvgqee--papyrsl 594
QY 595 EASLELFRFTIGMELAFQEOHFRGWL1LLAYVLLTYLLNMLTALMSETVNSVAT 654
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||
Db 595 daslelfrftigmela1fgeqlrfrygvlllllayvlltylllnmlalmselvnhad 654
QY 655 DSNSTWKLQKRAISYLEMENGWMC-RKQKAGVMLYGTGKPDGSPDERMCRVEEVMAS 713
: : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 655 nswslwklqkraisylemenywwcrkkhregrlkvgtrgdgtpderwctfveevmaa 714
QY 714 WEORLPTLCEDPSGAGVPRILENVLASPKEDGASEEYVVOLOS 763
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 715 weklptlpsedpsgpltnknpt----skpgksaseedhlp1qylqs 760

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RESULT 11
AAV06560
ID AAY06560 standard; Protein; 727 AA.
XX
XX AAY06560;
XX
XX 08-OCT-1999 (first entry)
XX
XX Human vanilloid receptor-related polypeptide 1 (VRRP-1).
XX
XX Vanilloid receptor-related polypeptide 1; VRRP-1; VR2;
XX capsaicin receptor; VR1; human; vanilloid; analgesic; pain;
XX inflammation; therapy; diagnosis.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX Misc-difference 194..208
XX /note= "unidentified residues"
XX Misc-difference 308
XX /note= "unidentified residue"
XX Misc-difference 311
XX /note= "unidentified residue"
XX Misc-difference 343..368
XX /note= "unidentified residues"
XX Misc-difference 404
XX /note= "unidentified residue"
XX Misc-difference 460..474
XX /note= "unidentified residues"
XX Misc-difference 558
XX /note= "unidentified residue"
XX Misc-difference 608
XX /note= "unidentified residue"
XX
XX MO9937675-A1.
XX
XX 29-JUL-1999.
XX
XX 22-JAN-1999; 99WO-US01418.
XX
XX 22-JAN-1998; 98US-0072151.
XX
XX (REGC ) UNIV CALIFORNIA.
XX
XX Brake AJ, Caterina M, Julius DJ;
XX
XX WPI: 1999-469113/39.
XX
XX New isolated capsaicin receptor polypeptide and related nucleic acid
XX - useful for detecting vanilloid compounds, identifying modulators,
XX and in diagnosis or treatment of e.g. pain and inflammation
XX
XX Claim 4; Page 91-93; 120pp; English.
XX
XX The present, claimed sequence represents a human vanilloid receptor-
XX related polypeptide 1 (VRRP-1 or VR2) sequence predicted from
XX available EST sequences (see AAX97499-501). VRRP-1 (see also AAY06559)
XX is an example of a capsaicin receptor-related polypeptide of the
XX invention. It is not activated by capsaicin or heat, but may
XX interact with the novel capsaicin receptor VR1 (see AAY06558). The
XX invention provides capsaicin receptor and capsaicin receptor-
XX related polypeptides and polynucleotides, as well as expression
XX vectors, host cells and transgenic animals. It also provides a
XX method of using such receptors to identify vanilloid compounds in
XX natural products or to screen candidate compounds that modulate
XX capsaicin receptor function for use as analgesics (vanilloid
XX analogues, therapeutic antibodies, antisense oligonucleotides,
XX capsaicin receptor-encoding polynucleotides for gene therapy),
XX flavour-enhancing agents, etc. Capsaicin receptor-related
XX polypeptides and specific antibodies can also be used for the
XX diagnosis and treatment of human disease and pain.
XX
XX Sequence 727 AA:
```

```
Query Match 75.8%; Score 3036.5; DB 20; Length 727;
Best Local Similarity 79.1%; Pred. No. 3.1e-280;
Matches 620; Conservative 5; Mismatches 82; Indels 77; Gaps 10;

QY 1 MTPSSSPVFRLETLDDGGDEGSEADRGKLDGSGCLPMESEFOGEDRRFAPQIRVNLNY 60
DB 1 mtpssspvfrletldggdgsdadrkldfsgslpmpesqfgedrfrapqirvnlny 60
QY 61 RKGTGASQDPNRPDRDLFNAVSRGVPEDLAGLPBYLSKTSKYLTDSYETGSGTKTCL 120
DB 61 rkgtgasqdpnrpdrdlfnavsrgvpedlaglpbylsktskyltdsyetygsgtkctl 120
QY 61 rktgasqdpnrpdrdlfnavsrgvpedlaglpbylsktskyltdeysegstgktcl 120
DB 61 rktgasqdpnrpdrdlfnavsrgvpedlaglpbylsktskyltdeysegstgktcl 120
QY 121 MKAVNLKDGVCNACTLPRLQIDRDSGNPQLVNAOCTDDYRGHSAHTAIKRSIQCYK 180
DB 121 mkavnlkdgvnactlprlqidrdsqnpqlvnaoetddyrghsahaiakrsiqcyk 180
QY 121 mkavnlkdgvnactlprlqidrdsqnpqlvnaoetddyrghsahaiakrsiqcyk 180
DB 121 mkavnlkdgvnactlprlqidrdsqnpqlvnaoetddyrghsahaiakrsiqcyk 180
QY 181 LIVENGANVHARACGRFFGKGGTCFFGELPLSLAACKTQMDVVSYLENPHQAPSLQA 240
DB 181 livenGANVhARAcGrffGKGgTCFFgELPLsLAACKtQMDVVSyLEnPHqAPsLQA 240
QY 241 TDSQGNFVLHALLWMSIDNSAENIALVTSWYDGLDAGARLCPTVOLEDIRNLODLPLKL 300
DB 241 tdsqgnfvlhALLwMSIDnsAEnIAlVtSwYdGLDAGARlCPTVoLEdIRNlOdLPLkL 300
QY 241 tdsqgnfvlhALLwMSIDnsAEnIAlVtSwYdGLDAGARlCPTVoLEdIRNlOdLPLkL 300
DB 241 tdsqgnfvlhALLwMSIDnsAEnIAlVtSwYdGLDAGARlCPTVoLEdIRNlOdLPLkL 300
QY 301 AAKECKIEIF-RHIL-QREFSGLS-HLSRKFTF-MCYGVRVSLVDLASVDSCEENSVLE 356
DB 301 aakeGKIeIF-RHIL-QReFSGLS-HLSRKFTF-MCYGVRVSLVDLASVDSCEENSVLE 356
QY 301 aakeGKIeIF-RHIL-QReFSGLS-HLSRKFTF-MCYGVRVSLVDLASVDSCEENSVLE 356
DB 301 aakeGKIeIF-RHIL-QReFSGLS-HLSRKFTF-MCYGVRVSLVDLASVDSCEENSVLE 356
QY 357 IIAFHCKSPRRHMYLEPLNKLQAKMDLLPKPELNLCLMYELTFAVAVHYQPTLK 416
DB 357 iIAFHCKSPRRHMYLEPLNKLQAKMDLLPKPELNLCLMYELTFAVAVHYQPTLK 416
QY 361 xxxxxxxxpdrrhmvyleplnklqakwlllpkfflnclnlyxymfitaavaybqplk 420
DB 361 xxxxxxxxpdrrhmvyleplnklqakwlllpkfflnclnlyxymfitaavaybqplk 420
QY 417 KOAAPHLKAQVGNMMLTGHILLGLGTYLVGQLMYEFWR-----HVF 460
DB 417 kOAAPHlKAQVGNmMLTGHILLGLGTYLVGQLMYEFWR-----HVF 460
QY 421 kqaaphlkaevgnsmlltghilllggyllyvqkwkfwxxxxxxxkfpgh-- 478
DB 421 kqaaphlkaevgnsmlltghilllggyllyvqkwkfwxxxxxxxkfpgh-- 478
QY 461 IMWISFIDYFEILFLFQALLTVWSQVLCFLALEMYLPLVLSALVGLMLLTYTRGFQHT 520
DB 461 imWISFIDyFEILFLFQALLTVWSQVLCFLALEMYLPLVLSALVGLMLLTYTRGFQHT 520
QY 479 -----rvvpapacvca---gaglaepalllytwl-----pahrh 509
DB 479 -----rvvpapacvca---gaglaepalllytwl-----pahrh 509
QY 521 GIYSVMIOKVLRLDLLRFLILYLFLGFAVALVLSIQEAMRPEAPFGNATESVQPMEG 580
DB 521 giYSVMIOKVLRLDLLRFLILYLFLGFAVALVLSIQEAMRPEAPFGNATESVQPMEG 580
QY 510 qchd-----pealvsisdg-wrpeaptgnatesvqpmeg 543
DB 510 qchd-----pealvsisdg-wrpeaptgnatesvqpmeg 543
QY 581 QDEDENGAQRGLLEASLELFKFTTGMGELAFQEOIHRFGMVLILLAVLTITILLMM 640
DB 581 qDEDENGAQRGLLEASLELFKFTTGMGELAFQEOIHRFGMVLILLAVLTITILLMM 640
QY 544 qedegngagyrgrllxaslelffklimgelatqeglhtrgmvlillayvillyllmm 603
DB 544 qedegngagyrgrllxaslelffklimgelatqeglhtrgmvlillayvillyllmm 603
QY 641 LIALMSETVNSVATDSWSIMKLOKATSVLEMENGYMWCRRKORAGVMLVGTGRPDGSPDE 700
DB 641 lIAlMSEtVNSVATDSWSIMKLOKATSVLEMENGYMWCRRKORAGVMLVGTGRPDGSPDE 700
QY 604 lialsetvnsvatdswsimklqkatsvlemengymwccrkkrqagvmltvgtkpdpode 663
DB 604 lialsetvnsvatdswsimklqkatsvlemengymwccrkkrqagvmltvgtkpdpode 663
QY 701 RMCFRVEEYVNMASWEQTLPTLCEDPGAGVPTLENPVLASPPKEDDGASENNYVQVL 760
DB 701 rmcfrveEYVNMASWEQTLPTLCEDPGAGVPTLENPVLASPPKEDDGASENNYVQVL 760
QY 664 rmcfrveevnasweqlptlcedpgagvptlenpvlasppkeddgaseennyvqvll 723
DB 664 rmcfrveevnasweqlptlcedpgagvptlenpvlasppkeddgaseennyvqvll 723
QY 761 LOSN 764
DB 724 lqsn 727

RESULT 12
AAW99798
ID AAW99798 standard; Protein; 727 AA.
XX
XX AAW99798;
XX
XX 16-JUN-1999 (first entry)
XX
XX Human VRRP-1 (VR2) capsaicin receptor.
XX
XX
```

KM VR1: capsaisin receptor; VR2: VRP-1; analgesic; diagnosis;
 KM human disease; painful syndrome.

OS Homo sapiens.

PN W0909140-A1.

PD 25-FEB-1999.

PF 20-AUG-1998; 98WO-US17466.

PR 22-JAN-1998; 98US-0072151.

PR 20-AUG-1997; 97US-0915461.

PA (REGC) UNIV CALIFORNIA.

PI Brake A, Caterina M, Julius DJ;

DR WPI: 1999-181023/15.

PT New capsaisin receptor polypeptide - useful for screening or

PS characterising capsaisin receptor-binding compounds

Claim 4; Page 86-88; 99pp; English.

CC The present sequence is an isolated capsaisin receptor polypeptide
 CC (1). Capsaicin polypeptides are useful for identifying binding compounds
 CC which affect cellular responses. Preferably this is for identifying a
 CC compound that binds (1) and affects a cellular response associated with
 CC capsaisin biological activity (e.g. intracellular calcium flux). The
 CC polypeptides and host cells are useful for detecting a vanilloid
 CC compound (an essential structural component of capsaisin) from natural
 CC products by detecting an alteration of intracellular response associated
 CC with capsaisin receptor activity, preferably an alteration of
 CC intracellular calcium levels, and are useful for screening for compounds
 CC for use in analgesics. Capsaicin receptor polypeptides and antibodies
 CC are useful for diagnosis and treatment of human diseases and painful
 CC syndromes. The transgenic mammals can be used to screen for capsaisin
 CC receptor antagonists and agonists. Prior art methods for screening or
 CC characterising new capsaisin receptor-binding compounds relied on assays
 CC using sensory neurons in culture or in intact animals. The new
 CC polypeptides provide a more sensitive screen.

XX Sequence 727 AA;

Query Match 75.8%; Score 3036.5; DB 20; Length 727;

Best Local Similarity 79.1%; Pred. No. 3.1e-280; Mismatches 82; Indels 77; Gaps 10;

QY 1 MTPSSSPVFLRLETLGQEDGSEADRGKLDGSGLPMESEFOGEDRRKFAPIRVNINLY 60
 DB 1 mtpssspvflrletldgsgedsgadrgklidfgslpmesefogedrrkfkpaqirvnlly 60
 QY 61 RKGTSASQPDPRFRDLRFNAVSRGVPEDLAAGLEPYLSKTSKYLTDESEYEGSGTGCTCL 120
 DB 61 rkgtsasqpdprfrdrlfnavsrvgpedlaglpeylsktskyltdeseyegsgctcl 120
 QY 121 MKAVNLADGVNACTLPLLOIDRDSGNPOLVNACTDDYVYRGSHALHATEKRLQCYK 180
 DB 121 mkavnladgvnactlplloidrdsqnpqplvnaqctddyryghalhalatekrsldcyk 180
 QY 181 LLVENGANVHARACGRPFQKGGCTCFYFGLPLSLAACKTQWQDVVSYLLENPHOPASIOA 240
 DB 181 llvengannvharcgrpfqkggctcfyfglplslaaactkqwdvvsyllenphopasioa 240
 QY 241 TDSQNTVYLAHALWISDMSAENIALVTSMYDGLQAGARLCPVOLEDIRNLQDITPILKL 300
 DB 241 tdsqntvylahalwisdmsaenialvtsmydglqagarlcpvtgledirnlqdltpilkl 300
 QY 301 AAKKCKIEIF-RHIL-QREFSGLS-HLSRKFTPE-WCYGPVRVSLVDLASVDSCEANSVLE 356
 DB 301 aakegkixifkrlhlaasgkfsjlkppfprkilewlmjpmvrvvxxxxxxxxxxxxxxxx 360

QY 357 IIAFHCKSPRRHRMVLLEPLNKLQAKWDLIPKFEFLNCLNLYMFTFAVAHQPTLK 416
 DB 361 xxxxxxxxxxxpdrhrmrvleplnlkqakwdlipkfflncnllymfetavayhqpclk 420
 QY 417 KOAAHPLKAEVGNMILTHIILLAGIYLYLGOLMYFWRR-----HVF 460
 DB 421 kgaaphlkaevgnsmlltghlililgyllylgqkfwxxxxxxxxxxxxxfrgh-- 478
 QY 461 WISFIDSYFELLPLFQALFVWSQVLCFLAEWLPPLVSALVGLMNLVYTRGFQHT 520
 DB 479 -----rvpapaevca---gaglaepallytwl-----pahrl 509
 QY 521 GIYSWIKQKVLRLDLRFLLIYVFLGFAVALVSLSQEAMPPEAPPTGNATESYQPMGC 580
 DB 510 gchd-----pealvisqd-wrpeaptgnatesvqmeg 543
 QY 581 QEDENGGAQYRGILNASLEFRTTGKELARQEOBLHFGVNLVLLAYVLLTYILLNM 640
 DB 544 gedegnagayrgilnaslelftlimgelafgeqihfrgmwllilayvlltyllilnm 603
 QY 641 LIALSEFVNSVATDSMSIWKLOKAI SVLEMENGYWMCRRKORAGVMLTVGTRKPGSPDE 700
 DB 604 lialsetvnsvaldswsiwklokaivlemengywccrkqragvmltvgtrkpgspde 663
 QY 701 RMCFRVEEVNMAWSDOTLPTLCEDEPSGAGVPTLBNPVLASPPKDEDEGASEENVVPQL 760
 DB 664 rmcfrveevnmaswqtlptlcepsgagvptlbnpvlaspkdedegaseenvvpql 723
 QY 761 LQSN 764
 DB 724 lqsn 727

RESULT 13
 AAY97359
 ID AAY97359 standard; Protein: 436 AA.
 XX
 AC AAY97359;
 XX
 DT 05-SEP-2000 (first entry)
 XX
 DE Human VR-2 (alternate form) partial protein.
 XX
 KW VR-2; human; vanilloid receptor; nociceptor; pain signalling;
 KW hyperalgesia; musculoskeletal disorder; neuropathic pain;
 KW chromosome 17p11-12, gene therapy.
 OS Homo sapiens.
 XX
 PN W0200029577-A1.
 PD 25-MAY-2000.
 PF 12-NOV-1999; 99WO-US26701.
 PR 13-NOV-1998; 98US-0108322.
 PR 28-DEC-1998; 98US-0114078.
 PR 26-FEB-1999; 99US-0258633.
 PR 19-OCT-1999; 99US-0421134.
 PA (MILL-) MILLENNIUM PHARM INC.
 PI Curtis RAJ;
 DR WPI: 2000-387790/33.
 DR N-PSDB: AAY97359.
 PT New capsaisin/vanilloid receptor polynucleotides and polypeptides, used
 PT to modulate pain signalling mechanisms
 PS Claim 11; Fig 3; 183pp; English.
 XX

CC The present sequence is the partial sequence for an alternate form of
 CC human capsacin/vanilloid receptor VR-2, which is involved in pain
 CC signalling. The coding sequence was isolated by searching a heart
 CC cDNA library for genes encoding novel receptors of the
 CC capsaicin/vanilloid family, and has been shown to be located at
 CC chromosome 17p11-12. This region has been associated with myasthenia
 CC gravis, Smith-Magenis syndrome, CORD5, Cone-rod dystrophy, choroidal
 CC dystrophy, central areolar and retinal cone dystrophy, and it is possible
 CC that the protein may be used to treat or diagnose these disorders. In
 CC addition, the gene, protein and its antibodies can be used to diagnose
 CC and treat hyperalgesia, inflammation, infection, ischaemia, joint pain,
 CC tooth pain, headaches, pain associated with surgery or neuropathic pain,
 CC possibly via the use of gene therapy.

XX Sequence 436 AA:

Query Match 55.98; Score 2240; DB 21; Length 436;
 Best Local Similarity 76.5%; Pred. No. 1.1e-204;
 Matches 436; Conservative 0; Mismatches 0; Indels 134; Gaps 1;

OY 195 GREFKGGGCFEYGEPLSLACTKQMDVSYLLENPHQPSAQATDSOGNTVLAHLM 254
 DB 1 griffg9gqctf9gelpslactkqwdvsvyllephqpsatqatdsqntvhalvm 60
 OY 255 ISDNSAENIALVSMYDGLQAGARLCPVQLDRIQLDLPKLAKGKIEIFRHIL 314
 DB 61 lsdnsaenialvsmygdlqagarlcpvtqlledirnlqdltpklakegkiefihl 120
 OY 315 QREFSGLSHRSKFTMECYPRVSVLYDLASVSCENSVLEIIFRCKSPHRRMYLE 374
 DB 121 qrefsglshsrkftmecypvsvlydlasvscensvleliffcksphrmyvle 180
 OY 375 PLKKLLQAKMDLLIPKELFNLILYMFIEFTVAAYHQPTRKQAPHLKAEVNSMLTF 434
 DB 181 plkkllqakmdllipkelfnllcmlymfiftavayhqprrkkaephkaevnsmllt 240
 OY 435 GHILLGLGILYLVGQLWYFRRHVFITWISFIDSYEILFLFOALLTVVSQVLCFLAIEW 494
 DB 241 ghillglgilylvgqlwfyrrhvfifwifisfidsyfeilflfqaalltvvsqvlciaiew 300
 OY 495 YLPLVASIVLGMNLILYTRGFOHNGIVSMIOKYLRLRLFLILYVLFGLGFANALV 554
 DB 301 ylplvasivlgmnlilytrgfhngivsmioqylrrllrflilyvlfglgfanaav 335
 OY 555 SLSEQAMRPAPTPGNATESVQPMEOGDEGNGAQYRGILEASLELFKFTIGMGLAFOE 614
 DB 336 ----- 335
 OY 615 QLHFRGNVLLLLAAYLLTYILLNLMLALMSETVNSVATDSWSIMKLRKAISVLEMENG 674
 DB 336 -----kaivsl'emeng 346
 OY 675 YMKRRKQKRGVNLVGTGRKDSPPDERMCRPREVENNANASWEQTLPTLCEPSSAGVPRTL 734
 DB 347 ymkrrkqrgvnlvgtgrkdsppdermcrpreveennanawegtlptlcepsagvprtl 406
 OY 735 ENPVLASPKEDGASENYVPVQLQSN 764
 DB 407 enpvlaspkedgaseenyvpvqlqsn 436

RESULT 14

AA97360
 ID AA97360 standard; protein; 554 AA.

XX AA97360;

DT 05-SEP-2000 (first entry)

XX Rat partial VR-2 protein.

KW VR-2; rat; vanilloid receptor; nociceptor; pain signalling;

KW hyperalgesia; musculoskeletal disorder; neuropathic pain;
 KW gene therapy.

XX Rattus sp.

PN WO200029577-A1.

PD 25-MAY-2000.

PF 12-NOV-1999; 99MO-US26701.

PR 13-NOV-1998; 98US-0108322.

PR 28-DEC-1998; 98US-0114078.

PR 26-FEB-1999; 99US-0258633.

PR 19-OCT-1999; 99US-0421134.

PA (MILL-) MILLENNIUM PHARM INC.

PI Curtiss RAJ;

DR MPI: 2000-387790/33.

PT N-PSDB; AAA30256.

PS New capsacin/vanilloid receptor polynucleotides and polypeptides, used
 to modulate pain signalling mechanisms

Claim 11; Fig 4; 183pp; English.

CC The present sequence is the protein sequence for the rat
 CC capsacin/vanilloid receptor VR-2, which is involved in pain signalling.
 CC The coding sequence was isolated by searching a dorsal root ganglion
 CC library for genes encoding novel receptors of the capsacin/vanilloid
 CC family. The human version of this gene is found at chromosome 17p11-12, a
 CC region which has been associated with myasthenia gravis, Smith-Magenis
 CC syndrome, CORD5, Cone-rod dystrophy, choroidal dystrophy, central areolar
 CC and retinal cone dystrophy, and it is possible that the human protein may
 CC be used to treat or diagnose these disorders. In addition, the human
 CC gene, protein and its antibodies can be used to diagnose and treat
 CC hyperalgesia, inflammation, infection, ischaemia, joint pain, tooth pain,
 CC headaches, pain associated with surgery or neuropathic pain, possibly via
 CC the use of gene therapy.

XX Sequence 554 AA:

Query Match 55.7%; Score 2230; DB 21; Length 554;
 Best Local Similarity 79.0%; Pred. No. 1.4e-203;
 Matches 437; Conservative 42; Mismatches 66; Indels 8; Gaps 4;

OY 213 LSLAACKQMDVSYLLENPHQPSAQATDSOGNTVLAHLMISDNSAENIALVTSMDG 272
 DB 7 lslaackqmdvtyllenphqpsatqatdsqntvhalvmisdnspensalvlmtydg 66
 OY 273 LLOAGARLCPVQLDRIQLDLPKLAKGKIEIFRIILORESG-LSHSKRTFEM 331
 DB 67 llqmagarlcpvtqlledirnlqdltpklakegkiefriilqretsypqsrkftew 126
 OY 332 CYGPRVSVLYDLASVSCENSVLEIIFRCKSPHRRMYLEPKLQAKMDLLIPKF 391
 DB 127 cygprvsvlydlasvscensvleliffcksphrmylepkllqekmdrlvstf 186
 OY 392 FLNLFNLILYMFIEFTVAAYHQPTRKQAPHLKAEVNSMLTGHILLGLGILYLVGOL 451
 DB 187 flnfyllymfiftavayhqprrkkaephkaevnsmlltghillglgilylvgl 246
 OY 452 WYFRRHVFITWISFIDSYEILFLFOALLTVVSQVLCFLAIEWYLPVLSALVGLMNL 511
 DB 247 wyfrrhvfifwifisfidsyfeilflfqaalltvvsqvlrfmetewyplvlsvlgvnl 306
 OY 512 YTRGFOHNGIVSMIOKYLRLRLFLILYVLFGLGFANALVSLSEQAMRPAPTPGNA 571
 DB 307 ytrgfhngivsmioqylrrllrflilyvlfglgfanaavslseqamrpaptpgna 366

QY 572 TSSVOMEOQEDQNGAQRGILLESLELFKFTTIGMGELAFQEOHFRGMVLLLLAYVL 631
Db 367 lrvetgprvrgqee---papyrslldaslelftktltimgelargeqlrfvrvlllllayvl 424
QY 632 LRYILLNLNLIALMSETVNSVATDSWSIKWLQKAISVLEMGNGYMW-C-RKKORAGYMLTV 690
Db 425 lrvllvlllllmllalmselvnhvadnsvsikkikakslvlemengywwwcrckkhhreglllv 484
QY 691 GTRPGSGSPERKRCFRVEEYNWMAWSMEQTLFTLCEDPSGAGVPRTLENPLYASPPKEDDEGA 750
Db 485 gtrgtdgtptercwfcfrveevnwawektlptlstdpspgpigtgnkknpt----skpgknsa 540
QY 751 SEENVYPVQLOLS 763
Db 541 seedhlpigvigs 553
RESULT 15
ID AAY06561
XX AAY06561 standard; Protein; 843 AA.
AC AAY06561;
XX
DT 08-OCT-1999 (first entry)
XX
DE Chicken capsaicin receptor subtype VR1.
XX
KW Capsaicin receptor; VR1; vanilloid-like receptor 1; analgesic;
KM pain; inflammation; therapy; diagnosis; chicken.
XX
OS Gallus sp.
XX
PN WO9937675-A1.
XX
PD 29-JUL-1999.
XX
PF 22-JAN-1999; 99WO-US01418.
XX
PR 22-JAN-1998; 98US-0072151.
XX
PA (RBSC) UNIV CALIFORNIA.
PI
PI Brake AJ, Caterina M, Julius DJ;
XX
DR WPI: 1999-469113/39.
DR N-PSDB; AAX87503.
XX
PT New isolated capsaicin receptor polypeptide and related nucleic acid
PT - useful for detecting vanilloid compounds, identifying modulators,
XX and in diagnosis or treatment of e.g. pain and inflammation
PS Claim 4; Page 97-99; 120pp; English.
XX
XX The present sequence represents chicken capsaicin receptor subtype
CC VR1 (vanilloid-like receptor 1). The invention provides capsaicin
CC receptor and capsaicin receptor-related polypeptides and
CC polynucleotides, as well as expression vectors, host cells and
CC transgenic animals. It also provides a method of using such
CC polypeptides to identify vanilloid compounds in natural products or
CC to screen candidate compounds that modulate capsaicin receptor
CC function for use as analgesics (vanilloid analogues, therapeutic
CC antibodies, antisense oligonucleotides, capsaicin receptor-encoding
CC polynucleotides for gene therapy), flavour-enhancing agents, etc.
CC Capsaicin receptor polypeptides and specific antibodies can also be
CC used for the diagnosis and treatment of human disease and pain.
XX
XX Sequence 843 AA:

```

0Y 4 PSSSPFPLETLELDGQEDGSEADGKUL---DPSGLPMEQSPQGEORKFAPO-IRVNLN 59
Db 49 pksnlf-----arrgfrvmgckdckmipmds fyy-mhlnapsvikfhan 93
0Y 60 YRKQ-----TGASQDPNPKFDRDLRNFAVSRVPEDLAGLPEYLSKTSKYLTDS 108
Db 94 merglhlh1stdstlgsekafrfydrtrrlfaavargstcktdldll1nrltclhtdd 153
0Y 109 EYTBGSGTKTCLMKAVNLKDGVNACILPRLQIDRDSGNPQPLVNAOCTDDYRGHSALH 168
Db 154 efkepegtctclkamlnlhdgkndctprllldiaaktgcclkefnaeytdnykygfaalh 213
0Y 169 IAIERASQCKLVLVENANYNARACGFPPQKGG-TCFYRGELPRLSLACTOMDVVSY 227
Db 214 Iaterrmylkl1lvqgadvhatacgaefk1kykbp fyygelprlslactqclvtkt 273
0Y 228 LLENHOPASLQATDSQNTVNLHLMVSDSASANIALVTSMYGGLQAOACARLCPVQLE 287
Db 274 llennpygaadlaaedsmgmw1hclveladhtkntctfvtcmymn1lllgaklnplkle 333
0Y 288 DIRNLQDLPPLKLAESKIEIFRHILQREFS--LSHLSKRETEWCYGPVRSVLDAS 345
Db 334 eltnkqgltrpl1laektg1g1fayal1rrtrelkdepcchrlskrtfewaayprvhsalylsc 393
0Y 346 VDSCSENVLELIAFHCSPPRHRRNVLEPLNKLLOAKKMLLRK-FLNPLCLNLYMFI 404
Db 394 Idtceksnvleliaysesctrrhemll1vper1nrl1gdkwd1fvb1l1y1f1f1ya1h1sl 453
0Y 405 FTAVAVYHOPPLTKKQAAPI-LKAEVGSNMLLGHILGLIGG1YLLVGO1WFMFRHNVFI 463
Db 454 lltaa1y1rvpvgkqdkprfa1fahs1gcyf1rvvgell1sv1y1g1y1f1f1y1f1vq1rps1kt 513
0Y 464 SFIDSVEILFLFQALLTVTSQVLCFLAIEWYLRPLVLSALVGLNL1YVTRGFQHTGY 523
Db 514 11vdeysev1l1f1vhs1ll11l1ssv1y1f1cg1elyvasw1f1al1yamm1ly1tr1g1f1q1g1y 573
0Y 524 SVMLOKVL1RDLRLRL1YL1VLEFGFNALVYS1QDEAMRPA1RGPNATESVQPMQEOED 583
Db 574 svmlakm1l1rd1ctf1m1y1l1v1l1g1fs1av1l1led-----dneqdt 616
0Y 584 EGN-----GAQYRG1LEASLELFKFTQIMGELAFQEO1LHFRGMV1LL1LA1VLL 632
Db 617 nsseyarctshckgr1f1y1ns1y1ycl1cl1f1kt1l1mg1d1ef1eny1f1ks1v1t1l1v1y1l 676
0Y 633 TY1LL1NL1ALMSETVNSVATDSK1WKLQAKA1SVLEME1NGY1WC-RKQ1RAG1WML1TVG 691
Db 677 ty1ll1m1l1a1m1etvsk1lae1qsk1sw1k1q1r1p1t1l1d1ens1y1ncl1r1fs1rgsk1v1y1g 736
0Y 692 TKPQSPDERMOCFRVEEYNMAM5QD1LPTLCLEDSGSG 729
Db 737 l1tpdgqdd1y1w1ct1f1v1dev1m1w1ctm1n1g1l1ne1d1p1cs1g 774

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Search completed: July 18, 2001, 15:58:43
Job time: 302 sec

Query Match	42.28;	Score 1689;	DB 20;	Length 843;
Best Local Similarity	47.28;	Pred. No. 9.8e-152;		
Matches 358;	Conservative 118;	Mismatches 218;	Indels 64;	Gaps 12;;

QY 572 TSSVOMEOQEDQNGAQRGILLESLELFKFTTIGMGELAFQEOHFRGMVLLLLAYVL 631
Db 367 lrvetgprvrgqee---papyrslldaslelftktltimgelargeqlrfvrvlllllayvl 424
QY 632 LRYILLNLNLIALMSETVNSVATDSWSIKWLQKAISVLEMGNGYMW-C-RKKORAGYMLTV 690
Db 425 lrvllvlllllmllalmselvnhvadnsvsikkikakslvlemengywwwcrckkhhreglllv 484
QY 691 GTRPGSGSPERKRCFRVEEYNWMAWSMEQTLFTLCEDPSGAGVPRTLENPLYASPPKEDDEGA 750
Db 485 gtrgtdgtptercwfcfrveevnwawektlptlstdpspgpigtgnkknpt----skpgknsa 540
QY 751 SEENVYPVQLOLS 763
Db 541 seedhlpigvigs 553
RESULT 15
ID AAY06561
XX AAY06561 standard; Protein; 843 AA.
AC AAY06561;
XX
DT 08-OCT-1999 (first entry)
XX
DE Chicken capsaicin receptor subtype VR1.
XX
KW Capsaicin receptor; VR1; vanilloid-like receptor 1; analgesic;
KM pain; inflammation; therapy; diagnosis; chicken.
XX
OS Gallus sp.
XX
PN WO9937675-A1.
XX
PD 29-JUL-1999.
XX
PF 22-JAN-1999; 99WO-US01418.
XX
PR 22-JAN-1998; 98US-0072151.
XX
PA (RBSC) UNIV CALIFORNIA.
PI
PI Brake AJ, Caterina M, Julius DJ;
XX
DR WPI: 1999-469113/39.
DR N-PSDB; AAX87503.
XX
PT New isolated capsaicin receptor polypeptide and related nucleic acid
PT - useful for detecting vanilloid compounds, identifying modulators,
XX and in diagnosis or treatment of e.g. pain and inflammation
PS Claim 4; Page 97-99; 120pp; English.
XX
XX The present sequence represents chicken capsaicin receptor subtype
CC VR1 (vanilloid-like receptor 1). The invention provides capsaicin
CC receptor and capsaicin receptor-related polypeptides and
CC polynucleotides, as well as expression vectors, host cells and
CC transgenic animals. It also provides a method of using such
CC polypeptides to identify vanilloid compounds in natural products or
CC to screen candidate compounds that modulate capsaicin receptor
CC function for use as analgesics (vanilloid analogues, therapeutic
CC antibodies, antisense oligonucleotides, capsaicin receptor-encoding
CC polynucleotides for gene therapy), flavour-enhancing agents, etc.
CC Capsaicin receptor polypeptides and specific antibodies can also be
CC used for the diagnosis and treatment of human disease and pain.
XX
XX Sequence 843 AA:

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0Y 4 PSSSPFPLETLELDGQEDGSEADGKUL---DPSGLPMEQSPQGEORKFAPO-IRVNLN 59
Db 49 pksnlf-----arrgfrvmgckdckmipmds fyy-mhlnapsvikfhan 93
0Y 60 YRKQ-----TGASQDPNPKFDRDLRNFAVSRVPEDLAGLPEYLSKTSKYLTDS 108
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0Y 109 EYTBGSGTKTCLMKAVNLKDGVNACILPRLQIDRDSGNPQPLVNAOCTDDYRGHSALH 168
Db 154 efkepegtctclkamlnlhdgkndctprllldiaaktgcclkefnaeytdnykygfaalh 213
0Y 169 IAIERASQCKLVLVENANYNARACGFPPQKGG-TCFYRGELPRLSLACTOMDVVSY 227
Db 214 Iaterrmylkl1lvqgadvhatacgaefk1kykbp fyfgyelprlslaactqlctvkt 273
0Y 228 LLENHOPASLQATDSQNTVNLHLMVSDSASANIALVTSMYGGLQAOACARLCPTQLE 287
Db 274 llennpygaadlaaedsmgmw1hclveladhtkntctfvtcmymn1lllgaklnplkle 333
0Y 288 DIRNLQDLPKLAKESKIEIFRHILQREFS--LSHLSKRETEWCYGPVRSVLDAS 345
Db 334 eltnkqgltrpllaaktgk1gfayllrrtrelkdepcchrlskrtfewaayrpvhsalyisc 393
0Y 346 VDSCSENVLELIAFHCSPPRHRRNVLEPLNKLLOAKMOLLPRK-FLNPLNCLYTMFT 404
Db 394 Idtceksnvleliaysesctrrhemll1vperlnrl1gdkwdt1vrb1ly1nflfyaah1st 453
0Y 405 FTAVAVYHOPPTLKQKQAPR-LKAEVGSNMLTGHILGLIGGTYLLVGOALMFWRHNVFTW 463
Db 454 lltaaayrpyvqkgdkprfa1fahs1gcyftrvgellsw1vg1yffrfg1yfvqtrpslkt 513
0Y 464 SFIDSYEILFLFQALLTVTSQVLCFLAIEWYLRPLVLSALVGLNL1YVTRGFQHTGY 523
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0Y 524 SVMLOKVLRLDLRLRLYLVLFGFNANALYSQDEAMRPARCPMATGESVQPMQEOED 583
Db 574 svmlakm1lrlcd1rftm1y1lv1l1g1fstav1lled-----dneqdt 616
0Y 584 EGN-----GAQYRG1LEASLELFTKTIOMGELAFQEO1LHFRGMV1LL1LAVALL 632
Db 617 nsseyarctshckgrftrysn1lyuclclftk1timgd1etfennyfrksv1t1lv1lyvl 676
0Y 633 TY1LLNLNLALMSETYNSVATDSK1TWKLOKA1SVLEBMENGYWMC-RKQORAGWMLTVG 691
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0Y 692 TKPQSGPDERMOCFRYEYVNMASWQD1LPTLCEDSSGAG 729
Db 737 ltpdgqddytwc1t1vdevnw1stwm1tn1gl1neodp1cs9 774

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Search completed: July 18, 2001, 15:58:43
Job time: 302 sec

Query Match	42.28;	Score 1689;	DB 20;	Length 843;
Best Local Similarity	47.28;	Pred. No. 9.8e-152;		
Matches 358;	Conservative 118;	Mismatches 218;	Indels 64;	Gaps 12;;

